

9  
FOURTH ANNUAL REPORT

OF THE

BOARD OF TRUSTEES

OF THE

Ohio Agricultural and Mechanical College,

TO THE

GOVERNOR OF THE STATE OF OHIO,

FOR THE YEAR 1874.



COLUMBUS:  
NEVINS & MYERS, STATE PRINTERS.  
1875.

*To His Excellency the Governor of Ohio :*

SIR: I have the honor to transmit to you the fourth annual report of the Trustees of the Ohio Agricultural and Mechanical College, with the accompanying documents.

Very respectfully,

J. SULLIVANT,  
*Secretary of the Board of Trustees.*

COLUMBUS, OHIO, November 20, 1874.

## REPORT OF THE TRUSTEES.

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Since the last annual report, the College edifice has been completed in many minor particulars, and gives satisfaction.

The boarding-hall, also, has been finally completed and partially furnished, in addition to the accommodations supplied by the occupant and proprietor, and when completely furnished will afford accommodation for seventy-five students.

The farm, before coming into possession of the College, had for many years been under annual rental to casual tenants, and, consequently, was in a much neglected condition and in bad order—the ground poorly cultivated and foul with weeds; the fences dilapidated and the rows grown up in bushes and briars.

During the year much labor has been performed in clearing the grounds, constructing new fences and removing old ones; and although the farm is not in strikingly good order, yet a vast improvement has been effected from its former condition, and in due time we trust there will be nothing to complain of in this direction.

The report of the Professor of Agriculture will furnish additional particulars and details.

The College grounds proper, under the faithful management of Mr. Harding, have received good attention. The lawn has been graded and sown to grass; the unsightly and unwholesome bog around the springs has been cleaned out, and the channels opened and straightened; pools of clean, pure spring-water have been formed, and the place now presents an agreeable and inviting appearance; and when grass borders and plats are grown, shrubbery planted, and the pools stocked with water-plants, it will furnish a pleasant resort under the shade of the grand old trees which have been left.

But beyond this mere contribution to beautiful uses, our stream and pools of spring-water may be utilized for the artificial propagation of fishes; and here, under the direction of our Professors of Agriculture and Zoology, the experiments could be easily and cheaply conducted, looking eventually to the restocking of our rivers and lakes with a cheap and palatable food; an object of no little importance, and which, even in the event of failure, would be worth all the experiments would cost.



It is designed to connect this spot with our botanic garden, and with properly laid out walks and judicious planting, unite the whole with our ornamental grounds.

In a garden and arboretum it is expected to collect and preserve specimens of the indigenous plants, vines, trees, and shrubs of Ohio, that are so fast disappearing and becoming extinct before the advancing tillage and pasturage of the country; and experiments are to be made as to the best methods of cultivating and propagating the most useful timber trees, so that our rapidly diminishing forests may be replaced or supplemented by an artificial planting, a measure of very great importance as regards the future.

Our gas works have been completed, furnishing all the gas needed for lighting the building and for use in the laboratory, where a large consumption is necessary.

Temporary coal sheds, for storing fifteen thousand bushels of coal, have been erected, and a Fairbanks's scales and platform, for weighing the coal, have been supplied, with a manifest saving of expense over the usual method of delivery by wagon-loads—for each load has been weighed on our scales and settled for on the ticket furnished by our janitor.

The steam-heating apparatus, which, last year, was left by the contractor in an incomplete and unsatisfactory condition, has now been completed at his expense according to contract; and although the weather has been too mild to afford a complete test, it is believed it will prove satisfactory and sufficient.

The last Legislature decided to reduce the number of Trustees of the College from twenty to a more compact and convenient number; and accordingly, upon the nomination of the Governor and confirmation by the Senate, the new Board, composed of the following members, namely: Ralph Leete, of Lawrence county; Warren P. Noble, of Seneca county; William Larwill, of Crawford county; Alexander Waddle, of Clarke county; and Joseph Sullivant, of Franklin county, met on May 1st, in the city of Columbus, and effected a permanent organization by electing Mr. Leete as Chairman; J. Sullivant, Secretary; H. S. Babbitt, Treasurer; and Waddle, Larwill, and Sullivant, an Executive Committee. Their subsequent action will more fully appear from the abstract of their proceedings hereunto annexed.

From the first opening of the College there has been a constant demand for such accommodation for students as would lessen the expense of an education by enabling them to board themselves; and although, in the opinion of some of the Board, it is doubtful if much advantage is to be gained for the student by these means; yet, willing in every way to aid this



meritorious class of students, they decided at their July meeting to try the experiment, and ordered that a mess-house, for the accommodation of twenty, should be erected. This building (of brick) has been located and erected in such a manner that, if it should not be needed for its original purpose, it may be converted, without loss, into a private residence, and occupied or sold, without detriment to any of the other grounds or houses. The building is substantially constructed, is nearly completed, and will be ready for occupancy by the January term.

At the opening of this college year, in September last, a number of applicants presented themselves for instruction, of whom some twenty were rejected on examination, as deficient in the necessary preliminary attainments; so that we have about fifty students in regular standing, pursuing their studies with commendable diligence.

As to the progress in science and literature of our classes, and the course of study pursued by each, reference is made to the accompanying report of the President and Professors.

In the statement of the Treasurer will be seen our receipts and expenditures from January 1st to end of fiscal year, November 15th, as follows: In general terms, we have received \$67,563.84, and expended \$65,126.07; leaving a balance from Franklin county donation of \$2,437 77.

For details and particulars, see his report.

Our valuable collections have been utilized and displayed so far only as our means have permitted us to provide safe and suitable cases.

It is particularly desirable that the large and valuable collection in our custody illustrating the geology and mineral resources of the State, should be suitably cared for and displayed in cases and drawers, so as to be made available to the public; for it would be a loss to science and a detriment to immensely valuable and growing industries of the State if the results of investigations and researches which have cost so much time and money should be stored away out of sight. On the contrary, a sound and liberal policy demands that they should be made accessible for examination and study to all classes of our citizens.

It is a well known fact that the State of Ohio alone suffers an annual loss of millions of dollars by insect depredations upon crops, forests, gardens, and fruits. Although no complete remedy against such destruction may be found for a long time to come, yet the only way to combat or palliate an evil of such enormous extent is by the careful and patient study of our insect foes. Observations and continued investigations as to length of life, propagation, changes and transformations, habits and food, and those localities and conditions of season and temperature most favorable or unfavorable to insect existence, must be systematically and



continuously made. In several countries of Europe, where the forests are carefully preserved and cared for, under government control, capable entomologists have been charged with the duty of studying the wood-eating and boring insects, as well as the leaf-eaters that affect such localities, and these measures have been attended with the most beneficial results.

In France and Germany, able entomologists have been called to the aid of the department of agriculture and rural affairs, and from time to time have rendered eminent service.

It is only from the study of insects in their natural habitats that the most valuable results are to be obtained, and following the enlightened example of European states, some of our own—notably New York and Missouri—have appointed and paid State entomologists, whose labors have been of the most valuable and satisfactory character.

We respectfully suggest that such a person could be appropriately and beneficially attached to our College, whose duty, as an assistant in the zoological department, should be to give lectures and instruction on this important subject for a part of his time, and make collections, to be deposited there, of the noxious insects, so that they might be made familiar to the public; while the remainder of his time might be employed in visiting any particular locality and collecting and disseminating information wherever insect ravages assumed abnormal proportions.

That the State of Ohio is also loser of an untold but very large pecuniary sum from the prevailing ignorance as to the diseases and rational treatment of our domestic animals, is undoubtedly true. This is a matter most intimately connected with the great agricultural interests of the country. All recognize the necessity and utility of schools wherein are taught the principles of anatomy, medicine, surgery, hygiene, and all that pertains to the conservation of human life; and no doubt the sum of human life has been lengthened and much suffering alleviated through their instrumentality. The same would be true if a like culture and intelligence were applied to the study of our domestic animals, their diseases and treatment; and there is scarcely a country in Europe where there are not such institutions founded and maintained at public expense, and recognized as a public necessity.

The Trustees of our College fully recognize the importance of this subject, and, considering it eminently proper and appropriate for an agricultural college, have been anxious to attach to it such a department, and although one of our professors has made veterinary science somewhat of a specialty, and would be able to teach it, our limited means have prevented us from obtaining the necessary outfit and appliances; for animal



anatomy and physiology can no more be properly and profitably taught than human, without the necesasry collections and illustrations—and we would be glad to give this important subject a prominent place and substantial foundation whenever the means are supplied.

In the department of Zoology the animal anatomy and physiology are now taught in a general way, so that the foundation of a better knowledge of the animal economy is already laid; but this department also needs to be enlarged and extended, and thus veterinary science may be introduced and established on a sound basis; with a very moderate additional expenditure, which as yet is beyond our means.

It is conceded that a scientific understanding of agriculture must include a competent knowledge of the laws governing the vegetable kingdom, or such at least as relate to the anatomy and physiology of the plant. This, under the general term of "structural botany," we are already teaching; but we greatly need a plant-house and propagating pits, where, freed from external influences and temperature, the conditions shall be uniform and under our control, and where experiments in acclimation, propagation, budding, grafting, and fertilization may be carried on at all seasons.

It must not be forgotten that Congress, in donating lands for the establishment of colleges, "in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life," stipulated that the mechanic arts should be co-equal with agriculture, and these together were to be the leading object, not to the exclusion, however, of other scientific and classical studies; and our name, imposed by the Legislature, "The Ohio Agricultural and Mechanical College," recognizes the same fact.

We have provided the means of teaching, in a practical manner, the fundamental principles of mechanics; but this branch of the physical laboratory could most profitably be extended and enlarged by a moderate appropriation for supplying a workshop, with the necessary machinery, wherein those of our students who have need to assist themselves through a college course by manual labor would here find the means more certainly than on the farm. The work on the latter is at periods dependent on the seasons and the weather, and would be fitful and irregular, as well as limited in amount, while the workshop would always be ready, and the student might find as much profitable employment as his regular studies would permit.

So far as investment and the cost of apparatus and appliances in any department is concerned, that of Agriculture far exceeds them all put together; for the farm, which is a necessary part of the equipment, has



cost over one hundred thousand dollars, and still the department needs additional collections of models, tools, specimens of agricultural products, and whatever will illustrate and facilitate the teaching of this important branch ; for as yet we have only been able to make a beginning in such collections.

The teaching of military tactics was also made imperative under the act of Congress. This has been done under the personal instruction of one of our experienced professors ; but we need arms and accoutrements before we can advance further, and we respectfully request that fifty or one hundred stand of suitable arms and accoutrements be transferred, by the proper authorities, to our College from the State Arsenal.

If, during the next year, there should be a greater demand for rooms than those we are now providing for the use of students wishing to board themselves, we have not the means to furnish them.

Our grounds still need much work. The roads, walks, and planting are yet to be attended to, and if an appropriation were made for this purpose, here also students might find employment.

I have already stated, in a former report, that through the liberality of a few individuals we have received donations of very valuable scientific books, forming the nucleus of a library ; but this is all, and we respectfully and most earnestly urge that a well-selected, although small, library of books for reference, to keep our students and professors posted in the progress of science and literature, is an indispensable necessity ; and until this want is in some measure supplied, we suggest that our students be allowed, under proper restrictions and safeguards, to draw books from the State Library.

To you, sir, a student and scholar long accustomed to draw on the rich stores of your own library, there is surely no need to address any argument other than a simple statement of our need in this respect.

From this summary of our present wants, let no apprehension be felt that we are asking anything unreasonable, or that in the future we will be constant and importunate solicitors for aid at the hands of the Legislature, although we should rejoice in the adoption of an enlightened and liberal policy, recognizing this institution as one to be cared for and fostered equally with the others which reflect honor and renown upon the State ; but we will be content if our present and immediate wants are supplied.

If an appropriation of thirty thousand dollars (\$30,000) be placed at the disposal of the Trustees, to be expended for the purposes herein indicated, they feel confident that they can equip the institution and the farm in such a manner, and place it on such a sure and substantial basis, that



they can now see no necessity of again applying for aid, and especially if, in addition to this appropriation, the request heretofore made to the Legislature regarding certain remnants of lands be complied with. And there seems to be great propriety in this, not only because it would in our opinion be the best disposition of them, but because their existence was brought to light by the great labor of one of our members in the interest of the College.

It is now twelve years since Governor Tod first called public attention to the act of Congress granting lands for the establishment of agricultural colleges, and in his annual message recommended its acceptance, as did also his successors, until finally, under the administration of Governor Hayes, the Legislature of Ohio did accept the grant, and solemnly pledged the faith of the State to fully carry out its provisions; so that the measure was amply discussed, and received the indorsement of the people. And now that the chief office of the State is occupied by one of large and varied experience in public affairs, having filled the highest position his State could hitherto bestow, and himself for years a practical agriculturist, personally managing one of the great farms of the Scioto valley, we confidently expect from him the same friendly interest as has been manifested by his predecessors in an institution founded to promote the great industrial interests of the State.

The State has expended millions in the erection and maintenance of its lunatic asylums, its reformatories for the vicious young of both sexes, its schools for the deaf and the blind, and its asylum for the imbecile and the idiotic. So far from objecting to all this, we commend the broad and noble philanthropy of which these institutions are the evidence.

It is a fact, however, that all the material aid which the Ohio Agricultural and Mechanical College has received has been from the generous donation of Franklin county, from which the farm has been purchased, and the College and boarding-halls built and partially equipped.

We repeat, that the State has not, from its own means, given one cent to this its own institution, which has to deal with its young men in the full possession of all their faculties, with uncorrupted morals and unclouded intellects, who are to be developed and trained through its instrumentality into high and useful citizenship, and in the future, it may be, to confer honor and renown upon the commonwealth.

J. SULLIVANT,

*Secretary of the Board of Trustees.*

NOVEMBER 20, 1874.



## REPORT OF THE PRESIDENT.

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HON. RALPH LEETE, *President Board of Trustees* :

DEAR SIR : I beg leave to present through you to the Board of Trustees of the Ohio Agricultural and Mechanical College my second annual report.

As the fiscal year which this report is made to cover includes portions of both our first and second collegiate years, it may be well to give a brief sketch of our organization from the beginning.

The College was opened in September, 1873. The main building was at that time in an unfinished condition, and the boarding-hall was only fairly under way. But little had been done to advertise the opening, for it was seen by Trustees and Faculty that a large attendance was an object to be deprecated rather than to be desired. Between thirty and forty students, however, presented themselves, of whom twenty-five were admitted to the College, representing eleven counties of the State.

A course of study had already been adopted, and classes were formed in the several departments as the necessities of the students entering seemed to require. Arrangements for boarding and lodging the students were extemporized in the main building. Faculty and students adjusted themselves to the situation, and a good term's work was done even under such disadvantages.

By the opening of the winter term, January 7, 1874, our condition was much improved. The main building had been completed, and the boarding-hall and dormitory was now ready for occupancy. The number of students was increased to thirty-seven in the winter term, and in the spring term, which commenced on April 7th, it was further increased until fifty names were enrolled. But forty students were, however, in actual attendance, some having lost their places by failure in scholarship, and some having been withdrawn on other grounds.

The end of the first year found us with a small body of good students, who made the nuclei of classes in many of our departments. Perhaps the work of organization was as safely completed with this small number as it could have been in any way.

At the beginning of the present term, or of our second collegiate year, September 17, 1874, forty new students presented themselves for admission, and, after a careful examination, twenty-five were found qualified to enter.



The total number of students now in attendance is fifty-nine, of whom fifty-two are young men and seven young women. These students represent twenty-two of the counties of Ohio, and are distributed as follows :

Champaign .....	2	Logan .....	2
Clarke .....	1	Lorain ..	3
Cuyahoga .....	1	Madison .....	2
Defiance .....	1	Mercer ..	1
Delaware .....	1	Meigs .....	3
Fairfield .....	1	Miami .....	1
Franklin .....	28	Pickaway .....	2
Hancock .....	1	Ross .....	1
Harrison .....	2	Seneca .....	1
Highland .....	1	Stark .....	1
Licking .....	1	Warren .....	1

The average age of our students is over eighteen years.

With this brief recapitulation of the main points in our history thus far, I will turn to the remaining topics that require to be presented in my report.

I. *Departments of Instruction, Equipments, Etc.*—Since the date of my last annual report two important additions have been made to the departments of instruction of the College—the professorship of *Zoology and Comparative Anatomy* has been filled, and an instructor has been furnished in *Free-hand and Mechanical Drawing*. The subjects already provided for are, then, as follows :

1. Mathematics and Civil Engineering.
2. Physics and Mechanics.
3. Chemistry, General and Applied.
4. Agriculture, including Botany and Veterinary Science.
5. Geology and Mineralogy.
6. English, French and German Languages.
7. Latin and Greek Languages.
8. Zoology and Comparative Anatomy.
9. Drawing, Free-hand and Mechanical.

These departments cover a great deal of ground, but the omission of a certain class of subjects from them cannot fail to excite remark. No provision has yet been made for the sciences that pertain to *man*—such, for example, as Mental and Moral Science, History, Civil Polity, and Political Economy. In regard to this omission, it is sufficient for the present to say that our students have not yet reached the point in their courses of study when this class of subjects is usually taken up. At least a year must elapse before the most advanced of them will require instruction in these departments. But I venture to express the hope that the symmetry of the education which we offer may very soon be completed by the provision of opportunities in these fields as well as in those of physical science. It may not be possible to provide at once a permanent professorship for



these subjects, but the establishment of a lectureship in Political Economy, for instance, might be made to meet the earliest demands of our students, and at the same time to give assurance to the State that this important class of subjects is not to be forgotten here.

It may be added that temporary provision has been made within the present faculty for teaching the outlines of History.

According to the courses of study now established, the professor of Modern Languages is made responsible for seven daily recitations of one hour each. For the present year he is not called upon to do this work, because our classes have not been organized long enough to spread themselves over the whole curriculum; but I see no reason to doubt that by another year the entire programme will be called for. As such an amount of work is clearly beyond the power of one man to perform, the services of an assistant for several hours a day will be a necessity.

That the provision of instruction in *Free-hand and Mechanical Drawing* meets a real want among our students is seen in the fact that twenty-four of them have already entered the classes in this department.

The subject of *Practical Entomology* is one of great economical importance to the people of Ohio. It involves such an amount of special knowledge and research that it cannot be properly turned over to the department of General Zoology. I respectfully recommend that, in view of its importance, a lectureship be established in the College on this subject at the earliest practicable date. I am persuaded that such provision could be made without any considerable outlay.

As to equipments, the departments are very unequal. Necessity directed that provision should first be made for the departments that are general or universal in their character, and which would first be called into service. We are, however, rapidly nearing a time when all of our departments will be in active operation, and when the want of outfit for illustration or of proper facilities for study will be seriously felt.

I respectfully refer you to the various department reports for a statement of our most pressing needs. I ask your special attention to estimates appended to some of these reports, by which it will be seen that the outlay of comparatively small amounts will add greatly to the facilities of the departments.

II. In regard to the *terms of admission* to the College, a few words need to be said. The Trustees and Faculty have felt from the first that however desirable mature and well-trained students may be, good faith forbade us to make any demands in the way of preparation which students coming from the common schools of the State could not meet. The terms of admission have, therefore, been gauged by this standard, and a competent knowl-



edge of the common branches is all that is required to obtain entrance to the institution. The single addition of the elements of Algebra is made to these terms, it is true; but, in point of fact, it is very rare that students who have acquired a good knowledge of the common branches have not also gained sufficient knowledge of this subject.

A *competent knowledge* of the common branches we have generally considered as that which would entitle its possessor to a certificate of good grade to teach a district school. The requirements of different county boards may vary widely, however, and some students who have gained certificates find themselves unable to pass our examinations.

It would be, in our judgment, a gross perversion of our funds to use them in any way in teaching the elementary branches. For this work public provision of the amplest kind has already been made. We want from the common schools those students—and only those—who have obtained the best training that such schools can give.

We find that this rule, when faithfully applied, gives us good material. A student who has really mastered Arithmetic, Grammar, and Geography, to the extent to which they are taught in our best common schools, has secured no small measure of mental discipline, and is able to take and to keep a good place in our lowest classes.

Another section of our students—and a very important one—is drawn from the high schools of the State. Graduates of our best high schools can generally enter about one full year in advance of the class above named.

I am well aware that by dispensing with entrance examinations, or by lowering the standard of admission, we could increase the number of our students very promptly and very largely. While I recognize the desirability of larger numbers, I am still very clear that it would militate against the best interests of the College, and of the cause of education in the State, to gain this increase in the way suggested. To open the doors of a college or university to crude and undisciplined youths, too ignorant often to appreciate their ignorance, and to invest them with the rights and prerogatives of college students, seems to me unnecessary, inexpedient, and indefensible. Such students are thus generally encouraged to give over the study of the common branches, of which they may still be shamefully ignorant, and to wander at will through a wide curriculum, every branch of which is beyond their adequate comprehension. To treat them in this way is certainly not to educate them.

All the discerning friends of the College will be better satisfied with the slow and orderly progress which it is now making than they would be with a more rapid growth that should be due to unworthy arts and adaptations.



III. The Faculty have spent a good deal of time and thought in discussing the question, "What courses of study will suit our students best?" They flatter themselves that the plan presented in the last College Catalogue is, on the whole, better adapted to the wants of those that we draw together than any that has been elsewhere published, and in this favorable opinion they are confirmed by the judgment of eminent educators to whom it has been submitted. Its chief merit, as they view it, lies in the happy combination of the obligatory and elective systems of study. The student, on entering the College, takes up a *fixed course* of two years' length. This course embraces the elements of the sciences that are most general in their scope, and of which no educated person can afford to be ignorant, and which, at the same time, lay a proper foundation for all subsequent work. At the end of this course he finds the various departments of the College open to him, and finds himself able to make an intelligent decision as to the branches to which he shall henceforth devote himself most largely.

To special students, who do not seek the degrees of the institution, full liberty of selection is given, subject only to the condition that they shall be found qualified, by previous study, for the departments which they seek to enter.

IV. I am happy to say that a large proportion of the young men boarding in the College buildings do more or less labor on the farm and grounds. I note this fact with satisfaction, on several accounts. In the first place, the expenses of the students are somewhat reduced by what they earn—a point of no small importance; in the second place, they secure a measure of the physical exercise which is indispensable to their health, and in a safe and profitable form. Thirdly, some of the knowledge which they acquire—as in the grading and ornamenting of grounds, road-making, etc., is in itself valuable. In the fourth place, and chiefly, they keep up in this way the habits and tastes which will make it easier for them to return to the farm, or to enter the workshop, if they shall choose these directions when their stay with us is concluded.

As to the economy of student labor I am not prepared to decide; but I submit that the points named above may well be brought into the calculation.

I will conclude my report with one or two additional suggestions:

1. We stand in great need of the nucleus of a library. Such works as cyclopedias and books of reference are in daily demand, and our students suffer in the tone and quality of their scholarship from not finding access to them. In the departments of Entomology and Botany we have already received, through the considerate generosity of friends of the College,



many rare and valuable works. If the other departments of the institution were as well provided as these, we should have no reason to complain.

2. The collections of the State Geological Survey that have been turned over to the College by the Legislature contain much valuable material, but to display them properly will require a considerable further outlay in the way of wall and table cases. I trust that this subject may receive as early attention from the Board as the state of the finances will admit.

With great respect, very truly yours,

EDWARD ORTON, *President.*

## DEPARTMENT REPORTS.

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### PHYSICS AND MECHANICS.

COLUMBUS, November 19, 1874.

EDWARD ORTON, A.M., *President* :

SIR: I beg leave to submit the following brief report of the department of Physics and Mechanics, of which I have charge :

When the College opened its first session, in September, 1873, the rooms set aside for this department were, in common with others, in an unfinished condition, and only a single instrument for use in the department had arrived. A little more than a year has passed, and, besides the fitting up of the rooms, in the way of tables, casing, etc., nearly all of the apparatus purchased by the College for the department has been received and arranged for use. The wisdom of the course pursued in the purchase of this apparatus of foreign makers almost entirely, is shown in the fact that we are in possession of an equipment which could not be obtained for even a much larger sum of money in this country. Owing to the fact that many of the instruments ordered are never kept in stock, much delay has occurred in the receipt of apparatus, and, indeed, several pieces are yet to come. The department is well equipped in apparatus for illustration, with a fair beginning in the way of instruments of precision, with which accurate measurements may be made, and from which reliable results may be obtained. It is in this direction especially that our wants lie. Instruments of exact workmanship are indispensable to a course of laboratory practice in Physics and Mechanics, and, when once obtained, are permanent and invaluable aids to the student in his scientific training, giving him confidence by their accurate verification of laws which he learns from his text-books, and thus encouraging him in their use in original investigation and research. A small amount expended each year in the purchase of an instrument of precision would enable us, in time, to present a department richly equipped for laboratory work.

A class of twenty or twenty-five studied during last year what may be called the elements of physics, and about the same number are pursuing the same study this year. In addition, five students are now engaged in laboratory work, spending two hours per day in the laboratory, besides some time necessarily spent outside in text-books and study. One section



of the class is now occupied in the study of heat, having been engaged principally, thus far, on the expansion of solids, liquids, and gases. The other section is engaged in the study of mechanics, carrying side by side theoretical and experimental mechanics. They have done most of their laboratory work in the investigation of densities and strength of materials. In this direction our appliances are limited, but interesting and valuable results have been obtained with the means at hand.

In conclusion, I have reason to be satisfied and pleased with the progress made and work done by students in this department, especially in taking into consideration the difficulties under which we have labored during the past year.

I am, respectfully, yours,

T. C. MENDENHALL,  
*Professor of Physics and Mechanics.*

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## CHEMISTRY.

COLUMBUS, OHIO, *November 17, 1874.*

EDWARD ORTON, *President:*

MY DEAR SIR: In compliance with your request, I have the honor to present the following report of the Chemical Department of the College for the current year.

The class in General Chemistry numbers fourteen. I believe that the majority of them are faithful students, and hope that they will make good progress in the study. I regret to add that the class is hampered by a few students who are not well prepared for the work that is expected of them. It is probable that some, if not all, of these ill-disciplined pupils will fail to pass their first examination.

Our facilities for experiment are much better than they were a year ago. We labor under many of the difficulties that are incident upon all new enterprises. Among these is one which every teacher of science will recognize as real, though at first sight it appears trivial, viz., a stock of the minor conveniences in experiment, the collection of odds and ends which gradually accumulate about a lecture-table. This want will gradually disappear, but I should like to have placed at my disposal a small sum, of say twenty-five dollars, to meet these little expenses, which no one can foresee until the occasion comes in which they are indispensable.

Our great need in General Chemistry is a suite of specimens illustrating, first, the natural history of the elements; second, the uses to which they and their compounds are put; third, the various products illustrating the place of chemistry in the arts and manufactures.



I have already endeavored to enlist the friends of the College in the work of collecting specimens suitable for our use, and am under obligations to the Austin Powder Company, the Rubber Company, the Malleable Iron Company, and the Bessemer Steel Works, of Cleveland, for specimens.

I feel greatly in need of a suite of ores and minerals, such as are mentioned in the ordinary text-books on chemistry, and believe that the purchase of a suite of minerals, like August Krantz's one hundred dollar collection, would be of very great advantage to the class.

To display these specimens and the various products of our own laboratory, a shallow case, with glass doors, should be placed in the lecture-room. Doubtless if a beginning were well made, and the attention of the public were, in some way, directed to this object, we should be able to make, in time, an exceedingly valuable collection at a very little expense to the College. In most cases we could obtain all that we desire for the mere cost of the jars in which the specimens are stored.

In Analytical Chemistry we have two students, one of whom is ready to begin his course in Quantitative Analysis. We have a fair prospect for a much larger class next year, and, I think, will need to provide one or two more desks. Our plan of study is working well, and seems to meet the necessities of our students.

We are well provided for Qualitative Analysis, and need only the purchase of a few chemicals and bottles for re-agents. Among the chemicals should be included a few of the rarer elements, or their compounds, which were designedly omitted from the first list, and a suite of minerals for blow-pipe determination. It is my intention to make this a prominent part of the Qualitative course, as it can very easily be made to supplement the course of preliminary examination of substances in the dry way.

We are not as well provided for Quantitative Analysis as we ought to be. The plan proposed for fitting up the laboratory has not been carried out for want of means. I hope that another year will find us fully equipped for any work that may be required of our students.

Omitting minor details, the conveniences for work that are most urgently needed are—

1. A large sand-bath and hood.
2. A steam-bath and hood.
3. A hood for poisonous gases in the laboratory, and another in the distillation-room.
4. A drying-case for filters, etc.
5. A large Bunsen's pump.
6. The fixtures of the balance-room and of the spectroscope-closet.



There are some other conveniences which we should have in time, although not of urgent need at present, such, for example, as a small forge, a muffle-furnace, apparatus for gas analysis, and for organic analysis.

I wish that inquiry should be made for the purpose of securing better ventilation in the laboratory. It is not, at present, all that can be desired.

Room No. 29 has received as yet none of its furniture except a sink. As this room is designed for researches requiring special attention and care, and for the private laboratory of the professor, I do not ask to have it fully fitted up until full arrangements have been made for the students. Nevertheless, it would be of great service to me, personally, if there were placed in it a working-table furnished with shelves and drawers and provided with gas and water. The complete fitting of the room would require, in addition, hoods, drying-cases, etc., like those mentioned as needed in the laboratory.

I am gratified to be able to add that our students in Analytical Chemistry are zealous and faithful, and are doing good work. May we have more like them.

Very respectfully, yours,

SIDNEY A. NORTON,  
*Professor of Chemistry.*

## ENGLISH LANGUAGE AND LITERATURE.

COLUMBUS, OHIO, *November 21, 1874.*

EDWARD ORTON, *President of Ohio Agr. and Mech'l College :*

DEAR SIR : I respectfully submit the following as my report of the two departments of English Language and Literature, and of the Modern Languages and Literature :

The classes now formed and reciting daily are—

One class in *English*, doing the work of the first year.

Two classes in *German*, doing the work of the first and second years respectively.

One class in *French*, doing the work of the second year.

New classes are all formed in consonance with the scheme for these departments as published in our last circular.

I have now, therefore, four daily classes, and was compelled to disappoint just expectations by refusing to form others at the beginning of the college year. With the next year there will be an imperative call for almost or all of the seven classes promised in our circular. For this college year I will cheerfully conduct my four daily exercises, though I need



not say it is more than full work, and, considering the preparation required for some of the classes, more than I can do with perfect justice to myself or the branches I teach.

For the next year and the future the problem remains, however, and the following solutions of it suggest themselves :

1. Of my present chair make two—one of English, the other of Modern Languages. This would give the Professor of English three hours per day ; the Professor of Modern Languages *four*. The classes in Modern Languages, however, require nothing in the way of lectures or other preparation for the first part of the first year, so that the professor's work would be less, or, at most, no greater than the English professor's with three.

2. Continue the three studies under one professor, with the course in each of the same extent as now, and employ a tutor for the junior classes, under the direction of the professor in charge, so far as concerns methods and details of instruction, leaving to the latter the advanced half of the work, with careful oversight of the whole.

3. Cut down all, or cut off one and part of another of the courses, so that one professor can do all the work.

This plan would cost least, and yet would cost most. So far as I can find out, only two colleges in the country have a course in English Philology and Literature as comprehensive as has ours, and there are very few, indeed, in which the two chief Continental languages and literatures have justice so nearly done them. Possibly enthusiasm for my own studies misleads me, but I accepted as but the simple truth the remark made to me by some of the best educators of the country during the past summer, that nothing in the organization of the College better proved our Trustees' wisdom and understanding of the needs of the time, than their having sanctioned a course in these three living languages and literatures *alongside and for the sake of* our splendid programme for the sciences.

For the sake of the College, I should be sorry to have this due praise diminished or retracted because of curtailment to ordinary and disastrous brevity of these linguistic and literary branches. If they be pursued as a part of *culture*—to make *men*—to study them for but one college year is to lay a foundation and leave it without a superstructure ; and if as a means for the study and daily needs of science—to make *specialists* of any sort—one college year in a foreign language is always inadequate, and usually a loss of time : the student is yet dependent on his lexicon and grammar, and the many thousands of young men and women of the country who forget, or have forgotten, their former smatterings of French



and German, are so many proofs of the rarity of will or opportunity for post-graduate development of college-learned elements into a knowledge sufficient for the reading of a newspaper, the hiring of a servant, or the study of a manual of any science.

If the *first* of these plans, then, costs too much in money, and the *third* in the value and prestige of our curriculum, the *second* may suggest itself as a fair compromise in both its financial and educational aspects.

Meanwhile, my classes and myself are cheerfully doing our best, and to the former the Trustees and Faculty owe their thanks for singular and steady good behavior in all regards.

Believe me to be yours, with great respect,

JOSEPH MILLIKIN.

## AGRICULTURE AND BOTANY.

COLUMBUS, OHIO, *November 21, 1874.*

PRESIDENT ORTON:

The following is a brief report of the work done during the year in the departments of Agriculture and Botany.

Lectures, or lessons, on the Principles of Agriculture have been given three times a week through the entire year. The subjects treated were, Soils, their composition and adaptations; Tillage; Fertilizers; Field Crops; Pastures and Meadows; Draining; Irrigation; Road-making; Fences; Hedges; Rural Architecture, and Farm Implements and Machinery. As far as possible, these topics were illustrated practically on the College farm. The sum of \$353.00 was paid to students for labor done upon the farm and College grounds.

A class in Botany was formed at the beginning of the third term, and had daily recitations and demonstrations in vegetable anatomy and physiology. When the spring opened, Systematic Botany was commenced, and continued to the end of the year. Examinations of this class gave evidence of commendable progress.

A list of articles needed for the complete illustration of these departments, and of veterinary medicine, has already been submitted.

N. S. TOWNSHEND.

## MATHEMATICS AND ENGINEERING.

COLUMBUS, OHIO, *November 7, 1874.**To the President of the College:*

SIR: The branches taught in this department the first year were, Algebra and Geometry, both elementary and advanced; Trigonometry, plane and spherical; Surveying; Navigation, and Analytical Geometry of two dimensions.

The studies thus far the present year have been substantially the same as the above, with the addition of General Analytic Geometry and Descriptive Geometry. The most advanced class has had no small amount of field practice with the compass, transit, level, and plane table, and can readily execute all ordinary field work.

## WANTS.

Models and plates are needed for various parts of plane, spherical, analytic, and descriptive geometry, and topographical drawing. Some of these may be purchased, but others should be constructed under the direction of the head of the department, in order to have the desired forms. The expenditure for these things will not exceed one hundred dollars. In case of a sufficiency of funds, it would be well to purchase a solar compass. Other needs can be supplied from time to time, as classes advance, or as the College can afford.

R. W. MCFARLAND.

## LATIN AND GREEK.

COLUMBUS, OHIO, *November 21, 1874.**EDWARD ORTON, President:*

DEAR SIR: I have the honor herewith to transmit to you the report of the Departments of the Latin and Greek Languages for the year ending December, 1874.

The report is included under three subdivisions: I. The Courses of Study. II. The Classes. III. The Needs of the Departments.

I. *The Courses of Study* contemplated, and, so far as the circumstances have demanded, carried out by the departments, have embraced nearly all that is usually taught of the Latin and Greek languages in the higher colleges of the country, and that is required as essential to the degree of Bachelor of Arts. At the close of the academic year 1873-4, the studies of the departments were rearranged in accordance with the new policy



of the College, and thrown into courses of two years each, daily recitations. These were then arranged and have been followed since, according to the schedule from the College circular :

### (1). LATIN LANGUAGE.

#### FIRST YEAR.

First Term—Livy, *Selections*; Exercises in writing Latin.

Second Term—Cicero, *Essays and Letters*; Horace, *Odes*.

Third Term—Horace, *Odes and Epodes*; Liddell's History of Rome.

During the year lectures will be given on Roman History and Antiquities, and the reading of the authors will be accompanied with exercises in composition and in written translation.

#### SECOND YEAR.

First Term—Horace, *Epistles and Satires*; Tacitus, *Germania and Agricola*.

Second Term—Tacitus, *Histories*; Juvenal, *Satires*.

Third Term—Juvenal continued; Quintilian.

Lectures will be given during the year on the Latin Language and Philology.

*Admission.*—Candidates for the first-year class will be examined as follows: In Latin Grammar (Allen and Greenough's is preferred); writing Latin; four books of Cæsar's *Commentaries*; six orations of Cicero; and six books of Virgil's *Æneid*. Allen and Greenough's Shorter Course is recommended as containing a sufficient amount of Latin prose.

### (2). GREEK LANGUAGE.

#### FIRST YEAR.

First Term—Xenophon, *Memorabilia*; Exercises in writing Greek.

Second Term—Herodotus; Smith's History of Greece.

Third Term—Herodotus continued; Euripides, *Alcestis*.

Lectures will be given during the year on Greek History and Antiquities.

#### SECOND YEAR.

First Term—Plato, *Phædo*; Homer, *Odyssey*.

Second Term—Homer continued; Sophocles, *Œdipus Tyrannus*.

Third Term—Demosthenes, *De Corona*.

Lectures will be given during the year on Greek Philology and Literature. Exercises in composition and written translation constitute an important feature of the course.

*Admission.*—Candidates for the first-year class will be examined as follows: In Greek Grammar (Goodwin's is preferred); in writing Greek, with the accents; and the first one hundred and eleven pages of Goodwin's Greek Reader (or three books of Xenophon's *Anabasis*).

The courses shown above have been followed to the extent mentioned under the next division.

II. *The Classes.* From the circumstances of the College for the first year (1873-4), and the small number of students, it seemed advisable to extend the limits of the amount of teaching done in the ancient languages

from the college work proper, as outlined in the schedules above; and, to meet the desires of a number of the students, classes were organized in Preparatory Latin and Greek. We feel under obligation to those who entered these classes the first year to continue the same until the members shall have entered the college classes proper. The classes, therefore, may be grouped under the headings: (1) College Classes, and (2) Preparatory Classes.

(1). COLLEGE CLASSES.

1873-4. SECOND AND THIRD TERM.

<i>Latin</i> —First year's class .....	1
<i>Greek</i> —First year's class .....	1

1874. FIRST TERM.

<i>Latin</i> —First year's class .....	4
Second year's class .....	1
	— 5
<i>Greek</i> —First year's class .....	5
Second year's class .....	1
	— 6

(2). PREPARATORY CLASSES.

1873-4. TWO TERMS.

<i>Latin</i> —Number in classes .....	10
<i>Greek</i> —Number in classes .....	5

1874. ONE TERM.

<i>Latin</i> —Number in classes .....	7
<i>Greek</i> —Number in classes .....	2

SUMMARY.

The whole number studying Latin in 1873-4 was .....	11
“ “ “ Greek “ .....	6
	— 17
The whole number studying Latin in 1874 was .....	12
“ “ “ Greek “ .....	8
	— 20

Seven members of the classes of 1873-4 fell out from the classes, either through failure to pass the final examinations or by removal from college; and ten new members entered in the fall of 1874.

The maintenance of the preparatory along with the regular college classes has entailed upon the instructor considerable labor; but when the preparatory classes shall have entered the college proper, as they may at the beginning of the next academic year, the number of recitations conducted will be reduced to four per diem.

III. *The Needs of the Departments* in the way of furniture are not numerous, although, with thorough work in view, they are quite imperative. The departments have already two or three maps of classical antiquity, and to complete the course several more are needed.



*Needs of the Departments of Ancient Languages.*—I may suggest the following maps, which an expenditure of about \$70 may purchase :

(1). <i>Curtius's</i> Charts of Athenian Topography .....	\$6 60
(2). <i>Kiepert's</i> and <i>Rheinhard's</i> wall maps—	
Environs of Rome .....	3 00
Plan of Ancient Athens .....	4 00
Plan of Ancient Rome .....	4 00
(3). <i>Rheinhard's</i> Album of Classical Antiquities .....	8 50
(4). <i>Launitz's</i> Illustrations of Ancient Life and Art .....	41 25

The work of the students has been done with interest, and, in some cases, with enthusiasm ; and I trust these departments may receive from those directly concerned the moral and financial support necessary to their highest usefulness.

With great respect, your obedient servant,

JOHN H. WRIGHT,  
*Assistant Professor.*

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## ZOOLOGY.

COLUMBUS, OHIO, *November 1, 1874.*

EDWARD ORTON, A.M., *President :*

SIR: I have the honor to submit to you the following report of the department of Zoology and Comparative Anatomy and Physiology.

This department was established in February last ; its organization is therefore more recent and less thoroughly completed than that of any other department of the College. Nevertheless, the facilities already provided are such as to enable students efficiently and profitably to pursue the studies laid down in the first part of the special course presented for their election. By another year, however, extensive additions should be made, in order that the latter part of the course may receive as thorough attention.

The following is a brief statement of the working material of the department :

*First.* Skeletons enabling us to illustrate the structure of representatives of all the orders and all the more important sub-orders of the mammals, including skeletons of all the domestic animals—of the latter we have not only mounted skeletons, but also of nearly all disarticulated skeletons, enabling the student to consider carefully the structure of each part ; skeletons representing all the orders (save one) of the birds ; also cases of stuffed birds ; and skeletons with stuffed and alcoholic specimens, illustrating all or nearly all of the orders of reptiles, amphibia and fishes.



Of the above some have been purchased, mostly from Ward, of Rochester; some have been given to the College; some collected by the writer, and some are the work of students in the Zoological laboratory.

*Second.* A large collection, chiefly of alcoholic material, comprising nearly a thousand specimens, obtained in part by exchange with other institutions, in part by purchase, but chiefly by the collections made by the writer on the Atlantic coast during the past summer, and in the vicinity of the College during the last few months, containing representatives of all (with two unimportant exceptions) of the remaining classes of the animal kingdom, and of a large majority of the orders, including insects, spiders, crustacea, worms, animal parasites of various kinds, mollusca, echinoderms, corals, sponges, etc.

*Third.* The works on Entomology in the College library and the writer's private collection of books upon all departments of Biological science; also the microscopes and microscopical preparations of the writer.

The work to be done in this department may be regarded as comprising two portions.

In the general course provided for all students doing the regular work of the College is given one term each of Elementary Physiology and Elementary Zoology. The work in the former is done by the use of a text-book, with recitations; in the latter, by means of object lessons, accompanied by a text-book.

In the work provided for those who elect Zoology as a special course, two years are spent in a careful study of the organization and life of the most important representatives of each of the greater groups of the animal kingdom. It is intended in this fuller course not only to familiarize the student with the forms of animal life, but also to give him a clear and intelligent idea of the structure of the domestic animals; of those animals that from their habits are especially injurious or beneficial to man; such knowledge of insect life as will lay the foundation for special study in Entomology; knowledge of the structure, habits and metamorphoses of the various parasitic organisms, etc.

A few words remain to be said with reference to the further plans and consequent needs of this department. It is deemed advisable to have, in connection with it, two collections. First, a synoptical collection, in which, by means of dry and alcoholic specimens, models and anatomical preparations, the whole animal kingdom can be adequately represented for teaching purposes. Almost every thing that has been procured thus far has been for the benefit of this teaching collection. Its greatest need at present is a good assortment of the elastic anatomical models made by Auzoux, of Paris. It is to be hoped that the promised expenditure for



this purpose will soon be made. There is immediate and pressing need of such of these as relate to human anatomy.

The second collection proposed is a faunal one, which should embrace full sets of specimens of every animal found in the State of Ohio, in order to give students an opportunity to become familiar with the animals of their own State, and also to make the College a zoological center for naturalists scattered throughout the State. Such collections are of slow growth, and there should be a definite sum provided, to be expended annually, in order that every opportunity to aid in making such a collection might be improved.

There is need also of provision for the purchase of a number of standard works which ought to be accessible to the students, and which none of the libraries open to them in and around Columbus contain.

The efficiency of the department would also be greatly increased by the early purchase of half a dozen student's microscopes of different make, at a cost of from fifty to seventy-five dollars each, not as a matter of luxury or amusement to the students, but as a means of thoroughly teaching the use of one of the most valuable instruments for all-sorts of scientific work.

There is also need of some of the simpler forms of apparatus for demonstrating such physiological processes as can readily be shown to the classes in that science. It is to be hoped that at some not distant day there will be such provision for thorough laboratory instruction in the science of Physiology as will enable students who may elect this as a special study to become accurate and original investigators in this science, as readily and efficiently as in the departments of Physics and Chemistry. The practical value of such training will be self-evident.

All of which is respectfully submitted.

ALBERT H. TUTTLE,  
*Professor of Zoology.*

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## DRAWING.

COLUMBUS, *November 20, 1874.*

EDWARD ORTON, A.M., *President :*

SIR: In forming the classes for Drawing, special attention was paid to the convenience of those wishing to pursue this branch of study. As a necessary result, we have more numerous recitations though fewer students present at the time.

We commenced with twenty pupils; our number now is twenty-four. Of these, two take five, fifteen take three, and seven take two lessons per week. Several students take an extra lesson with the class, working as opportunity offers.

We have seventeen recitations per week. Total number since commencing, one hundred and thirty-five. Considerable interest is felt in the subject of drawing. Hitherto the exercises have been of a pleasing, rudimentary character.

Several gentleman students receive lessons in lettering, as being important to them in engineering and kindred professions. Some of the ladies are studying illuminated lettering. Many have made good progress for the time devoted to the study.

One great advantage of the smaller class is the extra personal supervision each pupil receives.

Diagrammatic work has been done for the departments of Chemistry, Geology, and Physics.

Respectfully submitted,

THOMAS MATHEW.



## TREASURER'S REPORT.

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COLUMBUS, OHIO, *November 16, 1874.*

HON. RALPH LEETE, *Chairman of Board of Trustees of the O. A. and M. College:*

SIR: I have the honor of presenting my fourth annual report of the financial operations of the College to the close of the fiscal year ending on the 15th inst., being for a period of ten and one half months, and you will find them succinctly set forth in the following statements:

- I. A general statement of the receipts, disbursements, and balance of cash remaining in my hands.
- II. A statement showing the various appropriations for the year 1874, the amounts drawn from the same, and the balances unexpended and subject to draft November 15, 1874.
- III. A copy from advanced sheets of the annual report of the Auditor of State, showing the condition of the endowment fund.

The year began with a cash balance of \$26,426.17, but with large estimates for disbursements, amounting in the aggregate, as per page 29 of the third annual report, to \$72,374.79. The sum disbursed during the ten months and a half will be seen to be \$65,126.07, and more than the remainder will be required by the close of the calendar year.

During the year 1873 a sale of the agricultural bonds of Franklin county, amounting to \$60,000, was negotiated at a discount of five per cent. and accrued interest. It was found necessary to negotiate the remainder of the bonds in my hands, amounting to \$32,500.00, during the past year; and the opportune passage by the General Assembly of the act of March 30, 1874, authorizing the Commissioners of Franklin county to redeem said bonds with funds accumulated for another purpose, enabled me not only to dispose of the bonds at par value, but to secure in addition, for part of them, the accrued interest.

I was officially advised on the last of June that your Board had accepted the proposition of John G. Deshler, President of the Franklin National Bank, to pay four per cent. per annum interest on the monthly cash balances in the Treasurer's hands, upon condition of the same being

deposited in said bank, and on the first day of July I transferred all the cash funds belonging to the College to said depository.

Section 14 of the act to establish and maintain the College, passed March 22, 1870, requires, among other things in the annual report, "the amount of receipts and disbursements, and for what the disbursements were made; the number of professors, teachers, and other officers, and the position and compensation of each; \* \* \* \* \* an estimate of the expenses of the ensuing year," etc., etc. I have, in previous annual reports, made for the Board the estimates required, but by the creation of a new office, and the increase of duties devolving upon the Secretary in his changed relation, you should find these among the other items of his report.

#### AVAILABLE FUNDS.

The statements presented herewith show a cash balance, November 15, 1874, of \$2,437.77, belonging to the miscellaneous funds of the College; also, that a part of these funds, amounting to \$20,365.43, has been used for payment of the current expenses of the College, making \$22,803.20. The approximate income of the endowment fund, constituting a part of the irreducible deb. of the State of Ohio, will be ample for the legitimate expenditures of the current year for the "support and maintenance" of the College. It will be necessary for your Board to make, at the annual meeting in January, such appropriations of funds as it intends to authorize, according to the requirements of section 24 of the by-laws, which directs that "no money shall be paid by the Treasurer, except in pursuance of specific appropriations first made by the Board of Trustees."

The details of my accounts may be very readily examined and compared with the vouchers to sustain them; and they are, together with these more general statements, respectfully submitted.

HENRY S. BABBITT, *Treasurer.*



## STATEMENT I.

GENERAL STATEMENT OF CASH ACCOUNT FROM JANUARY 1, 1874, TO END OF FISCAL YEAR NOVEMBER 15, 1874 (10½ MONTHS).

*Henry S. Babbitt, Treasurer, in account with Ohio Agricultural and Mechanical College.*

## DR.

1874—Jan. 1.	To balance on hand .....	\$26,426 17
	To amounts received as follows :	
9.	From J. M. Trimble, for proceeds of sale of Virginia Military lands .....	\$500 00
22.	same .....	500 00
Feb. 4.	From students, for account of "term bills" .....	112 00
Mar. 2.	From Franklin county treasury, proceeds of coupons on Agricultural bonds .....	1,137 50
25.	From National Exchange Bank, nine months' interest on deposit of \$9,500 .....	427 50
Apr. 29.	From students, "term bills" account .....	171 00
	From State Treasury, on account of income from endowment fund .....	2,800 00
May 6.	From Franklin county treasury, proceeds of Agricultural bonds for \$15,000, converted at par, less accrued interest from March 15, 1874 .....	15,000 00
15.	From Prof. N. S. Townshend, for house rent one year .....	350 00
	From students, "term bills" account .....	136 00
June 22.	From F. W. Armstrong, on account of proceeds of sale of Virginia Military lands .....	885 00
July 31.	From John Little, Attorney-General, on account of subscriptions to location of College .....	277 50
Sept. 15.	From Franklin county treasury, for proceeds of Agricultural bonds .....	18,007 50
	From Franklin National Bank, net interest on deposit account .....	1 51
Oct. 6.	From students, "term bills" .....	383 00
31.	From President Orton, house rent .....	70 00
Nov. 14.	From Prof. Townshend, rent to November 1 .....	154 16
	From Prof. Mendenhall, rent to November 1 .....	175 00
	From Chas. Babbitt, engineer, rent to Nov. 1 .....	50 00
	Total receipts during year .....	\$41,137 67
	Total receipts, including balance .....	\$67,563 84

## CONTRA, CR.

1874—Nov. 14.	By disbursements as follows, as per detailed account, with vouchers :	
	From Building fund .....	\$17,523 70
	From Boarding Hall fund .....	6,450 16
	From Furniture and Apparatus fund .....	9,035 79
	From appropriation for improving farm, fencing, grading, repairs, etc .....	3,447 24
	From appropriation for gas-works .....	1,133 00
	From appropriation for "club house" .....	3,105 00
	From appropriation for salaries and current expense account .....	22,770 46
	For expenses of trustees .....	1,250 42
	For electric clock and gong .....	98 30
	For advertising Virginia Military lands .....	12 00
	Total disbursements (10½ months) .....	\$65,126 07
	Balance cash on hand .....	\$2,437 77

STATEMENT II.—APPROPRIATIONS.

A STATEMENT SHOWING THE BALANCES OF THE VARIOUS APPROPRIATIONS AT THE BEGINNING OF THE YEAR 1874, THE AMOUNTS APPROPRIATED, THE SUMS EXPENDED, AND THE BALANCES REMAINING UNEXPENDED AT THE CLOSE OF THE FISCAL YEAR NOVEMBER 15, 1874, A PERIOD OF TEN AND A HALF MONTHS.

FOR WHAT PURPOSE APPROPRIATED.	Balances un- expended Jan. 1, 1874.	Appropria- tions made since Jan- uary 1st.	Amounts sub- ject to draft in 1874.	Amounts dis- bursed.	Balances re- maining unex- pended No- vember 15, 1874.
Expenses of Trustees, travel, postage, stationery, etc.....	\$1,584 77	.....	\$1,584 77	\$1,250 42	\$334 35
Salaries of officers and faculty, and other current expenses .....	97 80	\$26,700 00	26,797 80	22,770 46	4,027 34
Farm improvement, grading, fencing, repairs, preparing for botanic garden, propagating pits, etc.....	1,331 11	4,000 00	5,331 11	3,447 24	1,883 87
Expenses pertaining to Virginia military lands ceded to the College	.....	12 00	12 00	12 00	.....
Boarding hall (building) .....	7,545 97	.....	7,545 97	6,450 16	1,095 81
Completion of main building and grounds .....	27,442 29	.....	27,442 29	17,523 70	9,918 59
Furniture and apparatus for main building .....	15,032 07	.....	15,032 07	9,035 79	5,996 28
Boiler-house and gas works.....	.....	1,133 00	1,133 00	1,133 00	.....
Mess-hall or club-house.....	.....	5,000 00	5,000 00	3,405 00	1,595 00
Electric clock and gong .....	.....	100 00	100 00	98 30	1 70
Grading and improving grounds (old appropriation).....	3,000 00	.....	3,000 00	.....	3,000 00
Expenses of commissioners to Washington (May 3).....	.....	500 00	500 00	.....	500 00
Improvements and repairs (June 25) .....	.....	1,000 00	1,000 00	.....	1,000 00
Totals.....	\$56,034 01	\$33,445 00	\$94,479 01	\$65,126 07	\$29,352 94



## STATEMENT III.

STATEMENT SHOWING THE AMOUNT AND CONDITION OF THE OHIO AGRICULTURAL AND MECHANICAL COLLEGE FUND, COMPUTED (BY THE AUDITOR OF STATE) UNDER PROVISIONS OF THE ACT PASSED FEBRUARY 10, 1870. [O. L., VOL. 70, P. 15.]

Amount of funds as principal January 1, 1874.....	\$470,307 28
Add interest on same for 6 months, to July 1, 1874.....	\$14,109 22
Add proceeds of coupons of \$34,500 of the Franklin county agricultural bonds, due March 15, 1874, at 7 per cent. per annum .....	1,207 50
Add interest on same to July 1, at 6 per cent.....	21 13
Total additions .....	\$15,337 85
Deduct for same period as follows:	
Requisition for income, paid April 28, 1874, being balance of appropriation from the income of 1873. \$2,800 00	
Interest on same to July 1.....	28 93
	2,828 93
Net additions first half year.....	12,508 92
Leaving amount of new principal July 1, 1874.....	\$482,816 20
Add interest on same for 6 months, to January 1, 1875.....	\$14,484 49
Add proceeds of coupons of Franklin county bonds, due September 15, 1874, as above .....	1,207 50
Add interest on same to January 1, 1875.....	21 13
Total additions second six months .....	\$15,713 12
Deduct of the amount of appropriation from income as liable to be drawn to January 1, 1875* .....	5,000 00
Net additions second half year.....	\$10,713 12
Leaving amount of principal derived from proceeds of sale of land scrip, and accumulations thereto, to January 1, 1875 .....	\$493,529 32
Upon this sum interest at the rate of six per cent. per annum, compounded semi-annually, is payable, under the laws of the State, to the Treasurer of the College. In addition to this, a deposit was made in the State Treasury by the Trustees of the College, in compliance with the provisions of an act passed January 20, 1871, of the 7 per cent. bonds of Franklin county, amounting to the sum of .....	34,500 00
Making an aggregate fund held by the State in trust for the Ohio Agricultural and Mechanical College of.....	\$528,029 32
The interest upon this amount for 1875, computed upon the above terms, would amount to \$32,069.00.	

MEMORANDUM STATEMENT, SHOWING THE AMOUNT OF FUNDS AVAILABE FOR OTHER PURPOSES THAN THE CURRENT OPERATING EXPENSES OF THE COLLEGE.

The balance of cash in my hands, as shown by the "general statement of cash account," November 15, 1874, is \$2,437.77. This balance is only *part* of the remainder of the *donation funds* received from Franklin county, and subscriptions of individuals to the location of the College; to this should be added the sums temporarily disbursed from these funds for the "support and maintenance" of the College, which are properly charge-

\* The sum of \$30,675.70 was appropriated by act of April 20, 1874, for the use of the College, under the restrictions of the act of Congress. The Trustees have appropriated \$27,600 of this amount for the "support and maintenance" account of the College, no part of which sum has as yet been drawn. Requisitions for \$27,000 were made November 14, 1874, and it is estimated that about \$5,000 will be required by January 1st, 1875, and the remainder from time to time during the ensuing year.

able to the income derived from the endowment fund. These sums amount to \$20,365.43, arising as follows :

Expended in 1874, from salary and maintenance account .....	\$22,770 46	
"    "    for expenses of Trustees .....	1,250 42	
Total .....		\$24,020 88
Less amount unexpended of appropriation of \$12,000 in 1873, from the income fund, by the State, for salaries and expenses of Trustees .....	\$855 45	
And amount drawn from State in 1874.....	2,800 00	
		3,655 45
Balance due from income fund, as above.....	\$20,365 43	
Add cash balance on hand .....	2,437 77	
Total .....		\$22,803 20

The sum of \$22,803.20 is therefore left subject to appropriation and disbursement, and available for any purposes the Trustees may deem proper. It is proper to state that the reason for the temporary use of the *miscellaneous funds* in the payment of salaries and other current expenses was to conserve the "income of the endowment fund," which is invested by the State, and upon which the State allows annual interest at 6 per cent., computed semi-annually, while the interest upon the funds deposited in bank draw but four per cent. on monthly balances, making a saving of more than three hundred and fifty dollars per annum upon the above sum.

Requisitions have been made upon the Commissioners of the Sinking Fund for income on the endowment fund, and these are made available when needed to meet whatever payments may be authorized by the board.

HENRY S. BABBITT, *Treasurer.*



## PROCEEDINGS OF THE BOARD.

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### FOURTH ANNUAL MEETING.

The Board of Trustees of the Ohio Agricultural and Mechanical College having been reduced by act of the General Assembly on April 16, 1874, to the number of five, and they having been duly appointed by the Governor and confirmed by the Senate, upon due notice being given, assembled in the city of Columbus, May 1, 1874, and the following is the true record of the organization and proceedings of the new Board of Trustees :

COLUMBUS, OHIO, *May 1, 1874.*

At 10 o'clock A.M., this day, Alexander Waddle, Warren P. Noble, William Larwill, Ralph Leete, and Joseph Sullivant, members elect to the Board of Trustees of the Ohio Agricultural and Mechanical College, under act April 16, 1874, met at the Agricultural rooms in the city of Columbus, and organized temporarily by the appointment of Mr. Waddle as Chairman, and Joseph Sullivant, Secretary.

Upon examination, it was found that all the above persons had been duly attested as Trustees of said College, by commission of the Governor, under seal of the State of Ohio—Mr. Leete to the term of one year; Mr. Waddle to two years; Mr. Noble to three years; Mr. Larwill to four years; and Mr. Sullivant to five years.

Messrs. Waddle and Noble having already taken the oath of office and indorsed on their commissions, the oath was then administered to Messrs. Leete, Larwill and Sullivant, by a competent officer.

Mr. Babbitt, Treasurer, presented a statement of the financial condition of the treasury of the Board, which was read and ordered to be placed upon file.

The members then examined the corrected plats, prepared by Mr. William Leete, of the lands in Pike and Scioto counties, belonging to the College, and after discussing various interests connected therewith until 1 o'clock, they took a recess.

*2 o'clock P.M.*—Board met and decided to visit the College; which they did, spending the afternoon in examining the buildings, including the boarding-house, the grounds, etc., and in conference with the President and Faculty of the College, and adjourned to 7½ o'clock P.M.

7½ o'clock P.M.—Board met and continued an informal discussion and examination of various measures and interests, in order to facilitate their formal and final action on them to-morrow; whereupon, at 10 o'clock P.M., the Board adjourned until 8 o'clock A.M., May 2.

MAY 2—9 O'CLOCK A.M.

Board met and had an audience with the Faculty of the College, and received statements and suggestions as to the present condition and needs of the departments.

On motion of Mr. Noble, it was

*Ordered*, That Mr. Leete be appointed a committee to revise and report such amendments and additions to the by-laws and rules as shall be by him found necessary; and that he report at our next June annual meeting.

On motion of Mr. Noble, it was ordered that this Board now proceed to elect by ballot a Chairman and Secretary of the Board, to serve until the first annual meeting thereof.

Whereupon Mr. Leete, having received four votes—being a majority of all the votes—was declared to be elected to the office of Chairman; and Mr. Sullivant, likewise having received the same majority of the votes, was elected to the office of Secretary.

*Resolved by the Board of Trustees of the Ohio Agricultural and Mechanical College*, That in addition to the duties required of the Secretary under the former by-laws, Secretary Sullivant shall be especially charged with the following, to wit: He shall examine all accounts for work done, and all other expenditures made for or on behalf of the College; shall see that the same are put and kept in such permanent form as shall seem necessary, so as to be at all times of easy reference; he shall see that all contracts are performed and carried into effect; that all amounts due to the College are collected and duly placed to the credit of the College; and in the absence of the balance of the Executive Committee, he shall have charge of the buildings and grounds and all pertaining thereto; he is to make all necessary contracts on behalf of the Board, audit and allow all necessary accounts, and make necessary expenditures, and take and retain vouchers therefor; and

*Resolved further*, That the said Joseph Sullivant shall, as such Secretary of this Board, and for all the duties with which he is charged, or shall be charged from time to time by this Board, upon the approval of the Governor of the State of Ohio, receive an annual compensation of two thousand dollars (\$2,000), which shall be paid him in monthly installments of \$166.66⅔, commencing from this date.

*Resolved*, That a copy of these resolutions be at once handed to Governor Allen for his approval.

The Committee on lands in the Virginia Military District having submitted a verbal report, showing that they had compromised with William J. Flagg, occupant of the Heaton survey, of 1,682 acres, in Scioto county, by his paying the College \$3,364, and the Board being satisfied that said



compromise was reasonable and proper, it is, therefore, ordered that said compromise be and the same is hereby approved.

On motion, it was

*Ordered by the Board of Trustees of the Ohio Agricultural and Mechanical College, That the committee on the lands belonging to said College in the Virginia Military District be and are hereby authorized to compromise with any claimant or claimants to any part or parts of said lands upon such terms as they may deem reasonable; provided, that in no case shall said committee be authorized to convey any part of such lands so in dispute by deed other than quit claim.*

The account of William Leete for services rendered in surveying and platting lands, examining and settling occupant claims and selling lands in the Virginia Military District belonging to the College, was presented, examined and discussed, and ordered to be filed with the College papers; and it is hereby

*Ordered, That there be allowed as compensation to William Leete, in full for all services rendered for this Board, as attorney and otherwise, up to the 24th day of November, A.D. 1873, a balance of \$451.00*

Mr. Robert Jones, superintendent of buildings, presented an exhibit of his receipts and disbursements, with vouchers, from January 1 to May 1, 1874, from which it appears there is a balance in his hands belonging to the College of seventy dollars and sixteen cents (\$70.16), and the papers are to be placed on file.

*It is hereby ordered by the Board of Trustees of the Ohio Agricultural and Mechanical College, That Warren P. Noble and Ralph Leete be and they are hereby constituted and appointed a committee to take charge of and make sales of any and all lands belonging to said College in the Virginia Military District, or elsewhere, except the College farm, and to proceed with sales of the same as provided by law; and also to take such action as may be necessary to secure all vacant lands in said district belonging to said College, and especially all claims pending before the Commissioner of the General Land Office, and to perfect title to the same. And for the purpose of executing this order, said committee is authorized to employ any necessary assistance, at any reasonable rate of compensation, and to pay the expenses of all such service out of any money arising from the sale of such lands, and to make a full report of their transactions at each regular semi-annual meeting of the Board, together with a detailed statement of receipts and disbursements.*

On motion, the Board now adjourned until 9 o'clock A.M. to-morrow.

MAY 3—9 O'CLOCK A.M.

Board met and proceeded to business.

A communication was received from Harvey H. Parry concerning the janitorship and engineer's place, and ordered to be filed; also a communication, with inclosed letter, from Professor Tuttle and other professors, which had the like destination.

*Resolved*, That Mr. Sullivant be and he is hereby authorized to enter into contract for the keeping of the boarding-hall of the Ohio Agricultural and Mechanical College for the balance of the present and for the coming college year; provided he finds, upon inquiry, no proper objections thereto.

*Resolved*, That Mr. Sullivant be required, as a committee of one, to see that the subscriptions to this College remaining unpaid be at once put in process of collection, and if necessary that he employ counsel in addition to the Attorney-General, the legal officer of this Board.

*Resolved*, That after the present term no tuition whatever shall be charged to any of the students; but each student shall be required to pay in advance five dollars for each term, to cover incidental expenses of the College.

*It is hereby ordered by this Board*, That Professor Albert H. Tuttle be and is hereby appointed to a full professorship of Zoology, at the annual salary of \$2,500, to commence with the beginning of the next college year, and that the Secretary furnish said Tuttle with a copy of this order.

*Resolved*, That the Hon. Warren P. Noble, ex-Governor Dennison and Hon. Thomas O. Jones be and are hereby appointed to proceed to the Federal capital, there to use all proper efforts to secure the passage through Congress of the bill introduced into the House of Representatives in January last by Mr. Jewett, to grant the swamp lands in the State of Ohio to this College; and also to subrogate this College to all the rights of this State under provision of the act of March 2, 1855.

*Ordered*, That the necessary expenses of the above commission be paid by this Board, and that an appropriation of not exceeding five hundred dollars (\$500) be and is hereby appropriated therefor.

On motion, at 2 o'clock P.M., the Board adjourned *sine die*.

RALPH LEETE, *Chairman*.

#### FIFTH ANNUAL MEETING.

COLUMBUS, OHIO, *June 23, 1874.*

In accordance with law and in pursuance of notice given, the annual meeting of the Board of Trustees of the Ohio Agricultural and Mechanical College opened at the College building at 10 o'clock A.M.

Messrs. Leete, Noble, Larwill and Sullivant—constituting a quorum—being present, the Board proceeded to business; and upon the minutes being read for approval, it was, on motion of Mr. Noble,

*Ordered*, That the journal be so corrected as to embody the amendment made to section 20 of the by-laws at the last meeting of this Board, which amendment was made by adding to the end of said section the following words: "except with the approval of the Governor;" and this order here recorded is therefore to be taken and received as part of the former proceedings.

The Secretary reported that he had sent a copy, under seal of this College, to his Excellency William Allen, Governor of this State, of the reso-



lutions of this Board relating to the appointment and compensation of the Secretary of this Board, and had received back the same with the approval of the Governor indorsed thereon ; and the paper was directed to be placed with the files of this Board.

A communication was received from the presiding officer of the Franklin County and Central Ohio Teachers' Association, asking permission to hold their annual meeting in the College building.

*It was ordered*, That the Franklin County Teachers' Association have permission to hold their annual Teachers' Institute in the College building.

Upon representation of President Orton as to the necessity as well as the convenience of having a uniform system of time and time-signals for the College, it was, on motion of Mr. Noble,

*Ordered*, That Professor Mendenhall be authorized to establish a system of time telegraphy in the College, at an expense not to exceed one hundred dollars (\$100), which sum is hereby appropriated for that purpose, to be expended under the supervision and direction of Professor Mendenhall, without charge on his part.

Before opening the College in September, 1873, and before the professors had entered upon duty, it had been necessary to call them together in consultation on various matters, and some personal expenses in traveling and board were incurred, and Professor Norton was instructed to proceed to New York and select apparatus for the department of Chemistry. Under these circumstances it was

*Ordered*, that Professor Norton's bill of expenses of eighty dollars (\$80) be allowed, and that an order be drawn in his favor on the Treasurer for payment of the same.

The Board, after holding a conference with the President and professors of the College, proceeded to make an inspection of the building and appurtenances thereof, and also of the boarding-house and grounds, and then adjourned to meet in the Governor's private office in the city, which had been kindly placed at their disposal.

*Four o'clock P.M.*—Board met, and was now full—Mr. Waddle having joined them—and being called to order, proceeded to business.

On motion of Mr. Leete, it was

*Ordered*, That the Secretary be and is hereby authorized to audit the accounts of either or all the professors, for any moneys by them or either of them expended while engaged in the service of the College, before the commencement of their respective terms ; and that the Secretary draw upon the Treasurer in favor of such professor or professors for the payment of any sum or sums so expended.

Professor Wright having discharged the duties of his chair acceptably and successfully during the last year, it was

*Ordered*, That the annual salary of Professor Wright be raised to fifteen hundred dollars (\$1,500) for the ensuing year.

On motion of Mr. Noble,

*Resolved*, That recognizing industry, energy, and economy as the first requisites of success in every pursuit in life, this Board recommends that the Executive Committee, so far as it is practical to do so, to offer employment to such students of this College as may desire it, for the performance of the manual labor required by the said committee in and about the College buildings and grounds.

A brief statement of the account of receipts and expenditures of the farm and agricultural department was received from Dr. Townshend, professor thereof, examined, and ordered to be placed on file.

A communication relating to the grounds and their improvement was likewise received from Prof. McFarland, read, and ordered to be filed for future reference.

After discussing various interests of the College, the Board adjourned until 8 o'clock A.M. to-morrow.

JUNE 24—8 O'CLOCK A.M.

Board met, and all the members being present, they proceeded to business.

The following statement of the Treasurer was now received and examined :

COLUMBUS, OHIO, June 24, 1874.

HON. RALPH LEETE, *Chairman Board of Trustees Ohio Agri. and Mech. College*:

SIR : Below I hand you a brief statement of the finances of the College since the first of May last, the date of my last report :

Cash on hand (including bonds) May 1, 1874, as per statement rendered .....		\$31,939 37
Received on account of term bills.....	\$136 00	
“ for rent of Prof. Townshend's house.....	350 00	
“ from F. W. Armstrong on account of sales of College lands .....	885 00	
	<hr/>	1,371 00
Total to date.....		<hr/> \$33,310 37

Disbursements as follows :

For building account.....	\$5,905 35	
For furniture and apparatus .....	1,307 67	
For improvements, repairs, etc.....	112 90	
For salaries and maintenance .....	4,154 11	
For boarding-hall .....	165 15	
For expenses of Trustees.....	80 99	
For purchase of stock .....	320 00	
	<hr/>	12,046 17
Balance of funds on hand.....		<hr/> \$21,264 20
In bank.....	\$3,764 20	
In bonds, par value.....	17,500 00	
	<hr/>	\$21,264 20



## APPROXIMATE ESTIMATES.

Cash on hand as above .....	\$21,264 20
The cost of the maintenance of the College, salaries of Faculty, etc., is payable from income of the fund in State Treasury. The estimate for current year (to January 1 next), none of which has as yet been drawn, is.....	24,000 00
Making total subject to use from date to January, 1875.....	\$45,264 20
The liabilities, ascertained and estimated from the best data I have, are as follows :	
Balance due Kanmacher & Stork, on account of \$3,500 retained until the heating apparatus is completed.....	\$2,865 00
Due same on original contract as adjusted by former Board.....	1,806 77
Balance due on contract for gas-works .....	593 00
Estimated due Kanmacher for bricks, say.....	300 00
Other unadjusted claims, say.....	1,000 00
	<hr/> \$6,564 77
Leaving available remainder.....	\$38,699 43
Respectfully submitted,	

HENRY S. BABBITT, *Treasurer.*

The following letter was received and discussed :

COLUMBUS, OHIO, June 20, 1874.

*To the Board of Trustees Ohio Agricultural and Mechanical College :*

GENTLEMEN: Allow me to submit to your consideration the following requisition :

In accordance with the general course that has been adopted by the Faculty, there will be organized next term a class in Elementary Zoology, in which will be taken a brief view of each of the principal groups of the animal kingdom, preparatory to the special courses in Zoology, Geology, etc. Some of these groups are principally, others exclusively, marine. The College is without material for their adequate illustration, and it will be worse than useless, it will be positively injurious, to require students to spend their time in committing to memory descriptions of things which they have never seen and of which they can form no intelligent conception.

Proper material is an urgent necessity for the work of the term that is before us. In view of this fact, I would respectfully ask of your body instructions to visit one or more of the best collecting grounds of the New England coast, and make collections for the College. In this manner a supply of material that will meet the requirements of our work in this and in future classes can be obtained more readily and more cheaply than by any other means at present available.

The total expenditure necessary could not exceed \$250 or \$300 ; and while I trust that other and pressing needs of the department of Zoology and Comparative Anatomy may receive your early attention, I would urge that, in view of an immediate want in this direction, this may be met at once.

ALBERT H. TUTTLE, *Professor.*

On motion of Mr. Noble, it was

*Resolved*, That Secretary Sullivant be and he is authorized to employ Professor Tuttle to visit the sea shore with a view to the collection of such specimens as will supply, to some extent, the needs of his department in the College, and that he be authorized to expend not exceeding \$300 therefor ; a full detailed account for all, which shall be returned to the Secretary, to be placed among the files of the Board.



The remainder of this day, until a late hour in the evening, was occupied in examining the books, accounts and vouchers of Mr. James M. Trimble, former member of this Board, and agent of this Board in the management of the Virginia Military lands belonging to the College.

The accounts and papers were voluminous, and being found entirely correct and satisfactory, were ordered to be preserved and filed.

They likewise examined the accounts, vouchers and report of Mr. Wm. Leete, which were also full and satisfactory, and were referred in the same way.

The Board having received and maturely considered a proposition from Mr. Leete to take charge of the lands in the Virginia Military District, on motion of Mr. Larwill,

*Ordered*, That the proposition of William H. Leete to take charge and management of the College lands in the Virginia Military District, their sale and the conduct of all minor litigations and negotiations concerning the same, be accepted by this Board; and that for all the unsold lands already discovered, about 45,000 acres, more or less, their sale and collection of the proceeds, and all expenses in reference thereto, he shall be paid at the rate of fifteen per centum on the proceeds as fast as the same shall be collected; and that for all the services and expenses in relation to lands yet to be discovered, he shall receive  $33\frac{1}{3}$  per centum from the proceeds thereof, to be paid in like manner as the funds shall be received; and that all moneys received by him (saving such percentages) shall, in all cases, be promptly paid to the Treasurer of this Board as soon as received; and he is authorized to compromise and adjust all unsettled claims of settlers upon any of said lands, for which he shall have the same compensation as for making sales of the lands now surveyed and appraised, and all such compromises shall be approved by this Board, or by the unanimous agreement of the committee on Lands, before the same shall be binding on either party; and it is further ordered that this Board reserves the power at any time to revoke this arrangement.

Board now adjourned to 9 o'clock A. M. to-morrow.

JUNE 25—9 O'CLOCK A. M.

Board met. All members present.

On motion of Mr. Leete,

*Resolved*, That any contract or contracts made by the committee on Lands, or any member thereof, with Ralph Hankins, of Pike county; James Puntenev, of Adams county; ——— Copas, ——— Ellis, or any other surveyor, for negotiating sales of the College lands, or for the discovery of such lands in the Virginia Military District, be disapproved, and all such contracts or agreements are hereby revoked; and the Secretary of this Board is hereby directed to furnish certified copies of this order to be served on each of the persons so employed.

James M. Trimble, a member of the first Board of Trustees, and an esteemed colleague of some of the present members of this the new and



reduced Board, having died since the general meeting in January, therefore

*Resolved by this Board*, That recognizing him to have been efficient and zealous in the management of the interests which he undertook, at the unanimous desire of the old Board, we sincerely regret the death of Mr. Trimble, and hereby tender our respectful sympathy to his family.

*Ordered*, That the Secretary transmit to them a copy of the above.

Communications having been received from President Orton and Professor Townshend relative to extensive alterations and repairs to the houses on the College grounds they were about to occupy, the Board, after deliberation and full discussion, and as indicating the future policy, adopted the following preamble and resolutions offered by Mr. Noble:

WHEREAS, The limited amount of funds under the control of this Board is utterly inadequate to the support of such an institution as the needs of the State require; and

WHEREAS, The success of this enterprise, therefore, necessarily depends much upon a rigid economy in all its expenditures; therefore,

*Resolved*, That it is inexpedient for this Board to pay for any repairs or improvements to or upon the dwelling-houses, or any of them, situate upon the College grounds, and which are now or are to be rented or leased out to professors or other employes of this Board.

*Resolved, therefore*, That hereafter all such buildings, and the grounds appurtenant thereto, in no case to exceed a half acre, shall be leased, if necessary, upon long terms of not exceeding fifteen years, at an agreed specific annual rental to be paid quarter yearly: Provided, that in such leases it shall be expressly stipulated that such buildings and grounds shall at all times be kept by the lessees thereof in as good condition and repair as when leased; and securing to such lessees the right to make any additions and repairs, for their own convenience and comfort, and at their own expense, as shall be deemed proper by the Board; provided the same does not detract from the value of the premises.

*Resolved further*, That the Secretary of this Board be directed to have a survey made, whereby a tier of lots one hundred and fifty (150) feet deep and seventy-five feet wide, fronting on Woodward avenue, and extending from High street to Neil avenue, shall be laid out and platted, with an alley  $16\frac{1}{2}$  feet wide along the north end thereof; and another tier of lots, north of said alley, of the same depth and width, fronting on a street sixty feet wide, to be laid out on the north end of said second tier of lots, extending from High street to the extension of Neil avenue: Provided, that said lots may be made smaller or larger, if necessary, to adjust them conveniently to ten (10) buildings now upon said land; and provided further, that an alley  $16\frac{1}{2}$  feet wide shall also be laid out, extending from Woodward avenue to the said street, on the north side of said second tier of lots, at the west side of every third lot from the said High street west, or as nearly so as shall seem proper, with a view to sell or lease said lots to professors and others requiring building places about the College.

A communication and accompanying exhibit was received from John G. Deshler, President of Franklin National Bank of Columbus. The letter is as follows. The exhibit was ordered to be filed:

COLUMBUS, OHIO, June 24, 1874.

HON. RALPH LEETE, *President Board of Trustees Ohio Agri. and Mech. College* :

SIR: Your College funds come under your control at certain times in large amounts, and are disbursed gradually, leaving a fund on deposit. The withdrawal can be anticipated. Such a deposit is valuable to a bank. This bank will allow you four per cent. interest for the balance you may have, computing the same monthly; and in addition to the security of the bank, I will give my personal guaranty in addition. I would expect the disbursements to be made by check on the bank as they were needed.

JOHN G. DESHLER

On motion of Mr. Leete,

*Ordered*, That the communication of John G. Deshler, Esq., to the Chairman of this Board, be received and placed on file, together with the exhibit accompanying the same.

*And it is further ordered*, That the Franklin National Bank be and is hereby adopted as the depository of the funds of this College, upon the terms mentioned in the communication of John G. Deshler, Esq., the President of the said bank, namely, by the payment of four per cent. interest, to be computed monthly; the fund so to be deposited to be drawn by checks, as the same shall be required for disbursement. And further, that the offer of said Deshler, to give his personal guaranty for the forthcoming of all College funds that may be deposited in said bank, be accepted.

A communication was received from the janitor and engineer, making certain requirements; and, on motion of Mr. Noble it was

*Ordered*, That the sum of one thousand dollars (\$1,000) be appropriated by the Board, to be expended by the Executive Committee in such improvements and repairs as shall by them be deemed necessary.

After discussion and examination of the subject by the Board, it was deemed highly desirable and advisable that good accommodation should be provided for those students who desire to board themselves while attending College. Wherefore, on motion of Mr. Noble,

*Ordered*, That five thousand dollars (\$5,000) be appropriated, to be expended by the Executive Committee in building rooms, to be leased out to students, on the College grounds.

On motion of Mr. Leete,

*Ordered*, That the Treasurer of this Board be authorized to furnish all stationery and postage which has been or may become necessary, to be used exclusively in the business of this Board.

And now, at 3 P.M., the Board adjourned *sine die*.